

### REMARKS

Applicants have amended claim 1 to more clearly describe the claimed control apparatus. Support for the amendment can be found in the originally-filed specification, *e.g.*, at page 12, lines 13-22.

Claims 1-13 and 16 are presented for examination.

#### Rejections under 35 U.S.C. § 103

The Office action rejected claims 1-13 and 16 under 35 U.S.C. § 103 as unpatentable over U.S. Patent No. 5,302,471 (Ito et al.) in view of U.S. Patent Application No. 2002/0146610 (Hayashi et al.).

The Office action asserts that the Ito et al. patent discloses a “control apparatus for a fuel cell stack comprising” the claimed “fuel cell stack,” “pair of end plates,” “electrical heaters” and “control unit which controls the power generation operation in the fuel cell stack . . . and which is operatively connected to the electrical heaters.” (Office action, p. 2) The Office action combines the Ito et al. patent with the Hayashi et al. reference, which allegedly discloses the claimed “water purging device.” (Office action, p. 4) Applicants respectfully disagree with the conclusion of unpatentability.

As explained below, even if there were some reason to combine the cited references, that combination would not have resulted in, or rendered obvious, the claimed subject matter.

The Office action points to the system control unit [8] of the Ito et al. patent as corresponding to the claimed “control unit.” (Office action, pp. 2-3) Claim 1, however, recites that the “control unit is adapted to operate the electrical heaters . . . when a power generation stop command for stopping the power generation operation in the fuel cell stack is output.” In contrast, the alleged “control unit” in the Ito et al. is adapted to operate the electrical heaters during start-up to reach the “rated power”:

When the voltage of the cell 1 comes up over the reference voltage, its temperature begins to be raised by connecting the loads. . . . Used as loads for raising temperature of the cell are an

electric heater (not shown) provided inside the end plates of the fuel cell 1, charge of the secondary cell, the air supply fans 6 and 7, and the system control circuit 8. Since the performance of the cell improves according to the raising of the temperature, the loads are increased to prevent the cell voltage from falling below the reference voltage, using the air supply fans 6 and 7, the system control circuit 8, charge of the secondary cell and the electric heater. *When the temperature of the cell grows high enough to obtain the rated power, supplying of electric power to the electric heater provided inside the both end plates of the fuel cell 1 is stopped.*

(Ito et al. patent, col. 7:4-16, emphasis added) Since the “control unit” of the Ito et al. patent is adapted to operate the heaters at start-up rather than in response to a “power generation stop command,” that patent does not disclose or suggest the claimed “control unit.”

Nor does the Hayashi et al reference disclose or suggest a “control unit [that] is adapted to operate the electrical heaters . . . when a power generation stop command for stopping the power generation operation in the fuel cell stack is output.” Instead, the Hayashi et al. reference discloses operating the fuel cell heaters “[w]hen the operation of the fuel cell 1 is started.” (Hayashi et al. reference, ¶¶ [0132], [0134], [0135])

Therefore, the Ito et al. patent and the Hayashi et al. reference, alone or in combination, do not disclose or suggest the subject matter of claim 1. In fact, by disclosing that the heaters are operated only during start-up, these references teach away from the claimed “control unit.”

Dependent claims 2-13 and 16 recite additional features, which make those claims independently patentable, and should be allowable for at least the same reasons as discussed above with respect to claim 1.

#### Form PTO-892

It appears that the Hayashi et al. reference, although cited by the Examiner, has not been listed on Form PTO-892. Applicants therefore request an updated Form PTO-892. *See* MPEP § 707.05.

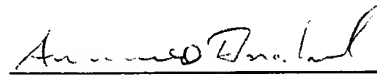
Conclusion

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: 9/13/07

  
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